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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/993,589 | 11/06/2001 | Elizabeth M. Walker | 1971.EEM | 9428 |

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EXAMINER

ROBERTSON, JEFFREY

ART UNIT

PAPER NUMBER

1712

DATE MAILED: 04/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/993,589

Applicant(s)

WALKER ET AL.

Examiner

Jeffrey B. Robertson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-58 is/are pending in the application.
- 4a) Of the above claim(s) 13-58 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☒ Claim(s) 1-12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.



DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I, claims 1-12, 14-25, 27-38, and 40-57, and the species of Group A, claims 1-12 in Paper No. 6 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Specification

2. The disclosure is objected to because of the following informalities: on page 3, lines 3-15, applicant has used the designations Fuel C and Fuel CM85. If these are trademarks, they should be treated as such an identified accordingly. Likewise, applicant has used the designation "Mobile 1 Oil". The trademark is spelled incorrectly and it should be identified as a trademark. In addition, in line 13, applicant has used the phrase "in this patent". If applicant is referring to the instant application, the term "patent" should not be used since the instant application has not been issued. If applicant is referring to another patent, it should be identified in that paragraph. ON page 3, line 21, "silicone-hydrogen" should be changed to "silicon-hydrogen" to reflect that the hydrogen atom is bound directly to the silicon atom.

Appropriate correction is required.

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Claim Objections

3. Claims 1-12 are objected to because of the following informalities: for claim 1, in line 5, "silicone" should be changed to silicon to reflect that the hydrogen atom is bound to the silicon atom. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-12 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 1 sets forth a reactive polysiloxane resin having both reactive carbon-carbon double bonds and silicon-hydrogen groups. However, in the specification on page 3, lines 20-25, applicant sets forth that this component is characterized in that there are alternating structures of polycyclic polyene residue and cyclic polysiloxane or tetrahedral siloxysilane residue present. Claim 1 lacks this feature, and furthermore applicant has not described any situations in the specification where the carbon-carbon double bond group is on the crosslinker is derived from anything but a polycyclic polyene.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Eckberg (U.S. Patent No. 4,587,137).

For claim 1, in column 3, lines 25-54, Eckberg teaches a composition comprising a polysiloxane (A), which contains both alkenyl and Si-H bonds and a component (E), an olefin containing polydiorganosiloxane. In column 8, lines 41-59, Eckberg further defines component (E) as a vinyl-terminated polydiorganosiloxane containing R groups. In column 4, lines 39-50, Eckberg teaches that the R groups are radicals such as the 3,3,3-trifluoropropyl radical. In Table III, column 11, Eckberg teaches that the compositions form crosslinked and crosslinkable gels.

8. Claims 1, 2, and 9-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Barnum et al. (U.S. Patent No. 5,171,817).

For claims 1 and 2, in column 2, lines 8-50, Barnum teaches cyclic polysiloxanes and tetrahedral siloxysilanes containing two or more hydrogen atoms. In column 3, lines 40-



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53, Barnum teaches that these cyclic polysiloxanes or tetrahedral siloxysilanes are reacted with polycyclic polyenes. In column 5, lines 14-20, Barnum teaches that 30 to 70% of the SiH groups are reacted, producing a polysiloxane resin containing both carbon-carbon double bonds and SiH groups. In column 7, lines 3-65, Barnum teaches that the prepolymers produced as described above are reacted with silicone polymers where the preferred polymers are vinyl dimethyl or divinyl methyl terminated. Barnum teaches that these polymers contain alkyl groups that may be substituted with fluorine atoms. In Example 2, column 9, lines 15-39, Barnum describes elastomer containing compositions that is cured in accordance with Example 1. For claims 9 and 10, in Example 1, column 8, lines 29-41, Barnum teaches that a gel is formed through activation with a platinum catalyst. For claim 11, in column 4, lines 31-50, Barnum teaches that the platinum catalyst is chloroplatinic acid. For claim 12, lines 28-32, Barnum teaches a cure rate retardant additive.

9. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Fehn et al. (U.S. Patent No. 6,359,098).

For claim 1, in column 6, lines 43-46, Fehn teaches that polydiorganosiloxanes that have vinyl groups are preferred for the invention. In column 6, line 27, Fehn teaches that the vinyl groups may be terminal groups. In column 5, lines 44-47, Fehn teaches that haloalkyl radicals such as the 3,3,3-trifluoro-n-propyl radical may be present on the polysiloxane. In column 2, lines 39-43, Fehn teaches that an organopolysiloxane having aliphatic multiple bonds and Si-bonded hydrogen atoms may

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be added in addition to the other components of the composition. In column 11, lines 12-19, Fehn teaches that the composition may be formulated as a gel.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maxson et al. (U.S. Patent No. 4,683,277) and Barnum et al. (EP 0 482 404 A2).

For claim 1, in column 2, lines 5-10, Maxson teaches that fluorine containing polysiloxanes are particularly desirable as encapsulants for electronic devices. In column 5, line 66 through column 6, line 6, Maxson teaches that gels are prepared using an organohydrogen crosslinker and a platinum catalyst. For claims 5 and 6, in column 3, lines 35-65, Maxson teaches a vinyl terminated fluoroalkyl containing polysiloxane, where at least 50% of the radicals are perfluoroalkyl radicals. In column 4, lines 9-17, Maxson teaches that the perfluoroalkyl radical is a 3,3,3-trifluoropropyl radical. For claims 9, 10, and 12, in column 8, lines 14-23, Maxson teaches the preparation of a gel containing the vinyl containing polysiloxane polymer, a catalyst inhibitor, and a platinum catalyst. For claim 11, in column 7, line 57, Maxson teaches that the catalyst is hexachloroplatinic acid.

For claims 1 and 2, on page 5, lines 30-34, Barnum teaches polymers that are useful as encapsulants for electronic applications. Barnum teaches on page 5, lines 10-

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12, that polymer gels are produced using the polymers or prepolymers of the patent.

On page 2, lines 24-30, Barnum discloses partial reaction products of polycyclic polyenes and cyclic polysiloxanes or tetrahedral siloxysilanes containing hydrogen atoms, which means that there is a carbon-carbon double bond and a Si-H group present.

Maxson and Barnum are analogous art in that they both teach the use of silicone gel compositions for encapsulants in electronic devices. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the composition of Maxson and the composition of Barnum to form one gel composition. It is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose. . . . [T]he idea of combining them flows logically from their having been individually taught in the prior art." *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980)

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For claims 3, 4, 7, and 8, it would have been obvious to one of ordinary skill in the art to combine the amounts of each composition so that the amounts of the vinyl terminated fluorine containing siloxane and the silicon hydrocarbon crosslinking agent fall within the ranges set forth by applicant in the claims. These ranges are result effective variables that depend on the desired properties of the final gel, such as, if used in an engine, an increased amount of fluorine containing polysiloxane to improve the resistance to gasoline and aviation fuels. A result effective variable is determined according to the desired properties of the resulting composition and would be obvious to one of ordinary skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ikeno et al. (U.S. Patent No. 5,086,147), Williams (U.S. Patent No. 5,354,830), Stepp et al. (U.S. Patent No. 5,580,921), Liao et al. (U.S. Patent No. 5,753,751), and Lee et al. (U.S. Patent No. 6,124,407) are cited for general interest.

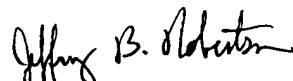
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey B. Robertson whose telephone number is (703) 306-5929. The examiner can normally be reached on Mon-Fri 7:00-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert A. Dawson can be reached on (703) 308-2340. The fax phone numbers for the organization where this application or proceeding is assigned are (703)

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872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


Jeffrey B. Robertson
Examiner
Art Unit 1712

JBR
April 28, 2003